

Current Wisconsin Modification:

Comm 63.0803 (2) (c) *Humidity controls*. This is a department rule in addition to the requirements in IECC section 803.2.3.2: If a system is equipped with a means for adding moisture to maintain specific humidity levels in a zone, a humidistat shall be provided.

IECC 2004 Supplement:

803.2.3.3 Humidity controls. When humidistats are installed, they shall have the capability to prevent the use of fossil fuel or electric power to achieve a humidity below 60 percent when the system controlled is cooling, and above 30 percent when the system controlled is heating.

Exceptions:

1. Systems serving spaces where specific humidity levels are required to satisfy process needs, such as computer rooms, museums, surgical suites and buildings with refrigerating systems, such as supermarkets, refrigerated warehouses and ice arenas.
2. Systems where humidity is removed as the result of the use of a desiccant system with energy recovery.
3. Reheat systems utilizing site-recovered (including condenser heat) or site-solar energy sources.

Current Wisconsin Modification:	IECC 2004 Supplement:
Comm 63.1027 Zone controls.	803.3.3 HVAC system controls. Each heating and cooling system shall be provided with thermostatic controls as required in Sections 803.3.3.1 through 803.3.3.5.
<p>(1) THERMOSTATIC AND HUMIDISTATIC CONTROLS. Except as provided in sub. (2), zone thermostatic and humidistatic controls shall be capable of operating in sequence to supply heating and cooling energy to the zone. Such controls shall prevent any of the following:</p> <ul style="list-style-type: none"> (a) Reheating. (b) Recooling. (c) Mixing or simultaneous supply of air that has been previously mechanically heated and air that has been previously cooled, either by mechanical refrigeration or by economizer systems. (d) Other simultaneous operation of heating and cooling systems to the same zone. 	<p>803.3.3.1 Thermostatic controls. The supply of heating and cooling energy to each zone shall be controlled by individual thermostatic controls capable of responding to temperature within the zone. Where humidification or dehumidification or both is provided, at least one humidity control device shall be provided for each humidity control system</p>
<p>(2) EXCEPTIONS. All of the following systems and zones are exempt from this section:</p> <ul style="list-style-type: none"> (a) Variable air volume (VAV) systems which, during periods of occupancy, are designed to reduce the air supply to each zone to a minimum before reheating, recooling, or mixing takes place. This minimum volume shall be no greater than the largest of the following: <ul style="list-style-type: none"> 1. 30 percent of the peak supply volume. 2. The minimum required to meet ventilation requirements of ch. Comm 64. 3. 0.4 cfm/square foot of zone conditioned floor area. (b) Zones where special pressurization relationships or cross-contamination requirements are such that VAV systems are impractical, such as isolation rooms, operating areas of hospitals, and laboratories. (c) Where at least 75 percent of the energy for reheating or for providing warm air in mixing systems is provided from a site-recovered or site-solar energy source. (d) Zones where specified humidity levels are required to satisfy process needs, such as computer rooms and museums. (e) Zones with a peak supply air quantity of 150 cfm or less. 	<p>Exception: Independent perimeter systems that are designed to offset only building envelope heat losses or gains or both serving one or more perimeter zones also served by an interior system provided:</p> <ul style="list-style-type: none"> 1. The perimeter system includes at least one thermostatic control zone for each building exposure having exterior walls facing only one orientation (within +/- 45 degrees) (0.8 rad) for more than 50 contiguous feet (15.2 m); and, 2. The perimeter system heating and cooling supply is controlled by a thermostat(s) located within the zone(s) served by the system.

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<p>(f) Multiple reheat systems serving multiple zones, other than those employing variable air volume for temperature control, that are provided with controls that will automatically reset the system cold air supply to the highest temperature level that will satisfy the zone requiring the coolest air. In the case of direct expansion cooling systems, cooling may be cycled based on the zone requiring the coolest air or average room temperature for all zones.</p> <p>(g) Dual duct and multizone systems that are provided with controls that will automatically reset all of the following:</p> <ol style="list-style-type: none"> 1. The cold duct air supply to the highest temperature that will satisfy the zone requiring the coolest air. 2. The hot duct air supply to the lowest temperature that will satisfy the zone requiring the warmest air. <p>(h) Systems in which heated air is recooled, directly or indirectly, to maintain space temperature that are provided with controls that will automatically reset the temperature to which the supply air is heated to the lowest level that will satisfy the zone requiring the warmest air.</p> <p>(i) A multiple-zone heating, ventilating and air-conditioning system that employs reheating or recooling for control of not more than 5,000 cfm or 20 percent of the total supply air of the system, whichever is less.</p>	
<p>(3) OFF-HOUR CONTROLS. Except as provided in pars. (a) to (c), mechanical HVAC systems shall be equipped with automatic controls capable of accomplishing a reduction of energy use through control setback or equipment shutdown during periods of nonuse or alternate use of the zones served by the system. The following systems are exempt from this subsection:</p> <p>(a) Systems serving areas expected to operate continuously.</p> <p>(b) Where it can be shown that setback or shutdown will not result in a decrease in overall building energy costs.</p> <p>(c) Equipment with full load demands of 2 kW or 6826 Btu/h or less that is controlled by readily accessible manual off-hour controls.</p>	<p>803.3.3.3 Off-hour controls. Each zone shall be provided with thermostatic setback controls that are controlled by either an automatic time clock or programmable control system.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. Zones that will be operated continuously. 2. Zones with a full HVAC load demand not exceeding 6,800 Btu/h (2 kW) and having a readily accessible manual shutoff switch.
	<p>803.3.3.1.1 Heat pump supplementary heat. Heat pumps having supplementary electric resistance heat shall have controls that, except during defrost, prevent supplementary heat operation when the heat pump can meet the heating load.</p>
	<p>803.3.3.2 Set point overlap restriction. Where used to control both heating and cooling, zone thermostatic controls shall provide a temperature range or deadband of at least 5°F (2.8°C) within which the supply of heating and cooling energy to the zone is capable of being shut off or reduced to a minimum.</p> <p>Exception: Thermostats requiring manual changeover between heating and cooling modes.</p>